

CLAIMS

Related Pending Application

Related Case Serial No: 09/870, 280

Related Case Filing Date: 08-10-01

1. Encapsulated surface wave component comprising:
  - a surface wave device (SAW) on the surface of a piezoelectric substrate, the so-called active surface, the said device comprising interdigital electrodes linked to conducting buses;
  - a base (E) comprising electrodes linked to external conducting pads;characterized in that: the active surface of the surface wave device is assembled to the base by way of a conductive adhesive which is anisotropic along an axis Z perpendicular to the plane of the surface wave device, at the level of the conducting buses opposite the electrodes of the base in such a way as to provide for electrical connections.
2. Surface wave component according to claim 1, characterized in that the set of electrodes has a structure comprising a succession of local thickenings ( $Z_c$ ) making it possible to compress the anisotropic conductive adhesive (ACF) locally.
3. Surface wave component according to either of claims 1 and 2, characterized in that the electrodes of the base constitute structures in relief constituting barriers against the creeping of the anisotropic conductive adhesive towards the active zones of the surface wave device.
4. Surface wave component according to claim 3, characterized in that the electrodes of the base have an architecture in the form of a comb exhibiting a haft ( $ME_{12}$ ) and teeth ( $DE_{12}$ ), the said teeth being perpendicular to the direction of propagation of the acoustic waves of the surface wave device.

5. Surface wave component according to claim 4, characterized in that the anisotropic conductive adhesive is deposited at the level of the teeth of the comb (DE<sub>12</sub>).  
5
6. Surface wave component according to one of claims 2 to 5, characterized in that the thickenings are of the order of a few tens of microns.  
10
7. Surface wave component according to one of claims 1 to 6, characterized in that the anisotropic conductive adhesive is a composite material comprising conducting particles and a binder material.  
15
8. Surface wave component according to claim 7, characterized in that the binder material is a thermosetting or thermoplastic polymer.  
20
9. Surface wave component according to one of claims 7 or 8, characterized in that the conducting particles are metallized polymer particles.
- 25 10. Surface wave component according to either of claims 7 and 8, characterized in that the conducting particles are metal particles.
- 30 11. Surface wave component according to one of claims 7 to 10, characterized in that the particles have a diameter of between around a few microns and about twenty microns.
- 35 12. Surface wave component according to one of claims 1 to 11, characterized in that the anisotropic conductive adhesive possesses acoustic absorbent properties.

13. Surface wave component according to one of claims  
1 to 12, characterized in that the conducting  
anisotropic adhesive is also situated on the  
entire periphery of the surface wave device in  
5 such a way as to achieve the encapsulation of the  
said device.